PEPFAR OVC PROGRAMMES: DATA MANAGEMENT and DATA QUALITY SYSTEMS

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Presented to: PEPFAR OVC Partners, USAID/South Africa

Date: September 12, 2006

What is Data Quality?

- Data Quality = data that reflects true performance.
- = Data that meets reasonable standards for validity, reliability, timeliness, precision, and integrity.
- = Criterion-based evaluation of data
- = Criterion-based system of data management
- = Requires a balance of cost and quality
- Data Quality factors or criteria include: accuracy, completeness, consistency, relevance, ease of manipulation, conciseness, timeliness, and accessibility.

Data Quality Criteria (VRIPT)

- Validity = Data clearly, directly, and adequately represent the result that it was intended to be measured. Have we actually measured what we intended?
- Reliability = Can we get the same results or findings if the procedure were repeated over and over?
- Integrity = Measure of ‘truthfulness’ of the data
- Precision = Measure of any bias or error
- Timeliness = The relationship between the time of collection, collation and reporting to the relevance of the data for decision making.

Khulisa's Approach to Data Quality Assessment

- Phased Approach
  - Phase 1: Evaluation of Data Management System and the associated processes and procedures
  - Phase 2: Validation and verification of reported data
  - Phase 3: Closure of Major Compliance Notes
- Risks to Data Quality are identified at each Phase

Establishing Risks To Data Quality

Overall Effect on Data Quality	Probability of Error Occurring			
	(4) Constantly	***(3) Frequently***	***(2) Occasionally***	***(1) Unlikely***
(4) Catastrophic	**16**	12	8	4
(3) Critical	12	9	6	3
(2) Marginal	8	6	4	2
(1) Negligible	4	3	2	1

General BEST PRACTICES in DATA QUALITY

- Well-defined indicators (using Indicator Protocol Reference Sheets (IPRS)).
  - The PEPFAR definitions have been broken down completely (word for word) and explained / defined in the context of each programme / site.
  - The IPRSs and data quality issues are regularly reviewed, and IPRSs are regularly updated.
- Well written M&E Plan/Strategy
- Clear authorities and responsibilities elements in the data management process -- namely, sourcing, collecting, collating, analyzing, reporting and usage. Safe storage of data.

General BEST PRACTICES in DATA QUALITY (cont)

- Good audit trail (hard copy and electronic)
  - Print off hard copies of submitted reports and be sure to also copy others in organization.
- Standardized forms used for data collection/collation/reporting by all sub-partners or sites.
  - Well designed tools (clear, concise questions/format) greatly improves quality of data.
- Data verified by a third party before submission to next level

General BEST PRACTICES in DATA QUALITY (cont)

- Error Logs in place to record errors / missing information, the correction, and reason for the discrepancy.
- Elimination of transcription or manipulation errors through well-designed IT systems or systems for cross-checking transcribed and analysed data.

HWSA BEST PRACTICE in Data Quality

- The Data Management System at HWSA was regarded as a best practice in last year's round of DQAs:
  - The design and use of one (1) collection tool at all the HWSA sites – the 'Data Booklet' –strengthens the validity of the data.
  - The 'Data Booklet' is the collection and reporting tool at site level – it is comprehensive, has very specific, unambiguous fields and is easy to understand.
- All HWSA field workers were involved in developing the entire 'Data Booklet' to highlight any problems. All these factors maintain the reliability of the DQS.

HWSA BEST PRACTICE in Data Quality (cont)

- HWSA gave M&E training to all sites in how to use the "Data Booklet" and thus ensured consistency and collection of correct data
- HWSA's comprehensive data capturing system:
  - a written 'Data Capturing and Quality Control Procedure' that stipulates various checks to be completed by data capturers.
  - Dedicated "data capturers" capture the data from the 'Data Booklets',
  - Data is then printed – the same data capturer who captured the data checks the printout with the 'Data Booklet'.
  - A 'data captured' stamp is placed on the 'Data Booklet' after it has been captured successfully.

HWSA BEST PRACTICE in Data Quality (cont)

- The data capturers flag (i.e. highlight / mark) any ‘Data Booklets’ containing errors or missing information (most common issue).
- The data capturers follow up any errors/missing information directly with the sites.
- The supervisor of data capturers moderates all the ‘flagged’ booklets using a sampling technique and marks the ‘Staff Booklet Tracker’ form with “QC” (Quality Controlled).
- An ‘Error Log’ tracks errors. The ‘Error Log’ consists of the following fields: field worker; week no.; service code; spelling error; incomplete and capture error; number of records; percentage accuracy for the booklet and percentage accuracy for data capture.

HWSA BEST PRACTICE in Data Quality (cont)

- A weekly planning sheet and a weekly timesheet are filled in by all the field workers. These sheets form part of the 'Data Booklet' collection tool.
- Several cross checks provide a substantial Audit trail that is difficult to tamper with… This further strengthens the integrity of the Data Management System:
  - Planners and time sheets are compared to ascertain if the work planned was indeed carried out
  - All field workers work in pairs
  - each client has to physically sign the register when the service is completed.

STRENGTHS to VALIDITY in OVC PROGRAMMES

- Clear and concise definitions of who is “reached” and who is “trained”
- One data collection tool at all sites reporting up to the main partner.
- Verification of training session attendance registers.
- Regular site visits and spot checks on collection tools and those receiving services to verify data.

RISKS to VALIDITY in OVC PROGRAMMES

- Incorrect data received from sub partners which is then used by the prime partner to report to donor. (Incorrect = not using precise definitions)
- Inconsistent, unclear definitions between sites, partners and donor on what is being reported.
- Out-of-date guidelines used by sites, partners.
- Lack of adherence to definitions of those receiving specific services.
- Lack of staff to carry out monitoring and evaluation activities.
- Illegible data.

RISKS to VALIDITY – OVC Indicator Issues

- “Number of individuals trained”
  - no operationalized definition for ‘trained’.
  - issues with collation tools and no consistent data handling methodology.
- “Number of OVC served”
  - issues with collation tools and no consistent data handling methodology.
- “Number of service outlets / programs”
  - issues with collation tools and no consistent data handling methodology.
- Number of individuals receiving counseling and testing”
  - measuring ‘number counseled’ instead of ‘number of HIV tested and counseled’.
  - issues with collation tools and no consistent data handling methodology.

STRENGTHS to RELIABILITY in OVC PROGRAMMES

- Comprehensive documented monitoring and evaluation plan and strategy.
- Training on completion of tools.
- Standardised reporting format used by all sub-partners (sites).
- Verification of data from sites before reporting to donor.
- Implementation of in-house procedures to ensure quality checks are done.
- Committed staff.

RISKS to RELIABILITY in OVC PROGRAMMES

- Data management tools not consistently reviewed.
- Several version of MER / IPRS documents or data tools without version control.
- Lack of audit trails, e.g collation tool for reported data.
- Unclear and complicated collection tools.
- Use of different collation tools from one reporting period to another.

STRENGTHS to INTEGRITY in OVC PROGRAMMES

- Safe storage of data such as strong room, password protected files.
- Introduction of quality control measures.
- Verification of data before submission.
- Copying several people within the organisation at submission.
- More than one person to handle data, introduces a check point.

RISKS to INTEGRITY in OVC PROGRAMMES

- Lack of defined process on how final reporting to donor is to be done.
- No checks on individual/person responsible for reporting.
- Other key members in partner orgnaisation not kept updated (i.e. copied) on submitted reports.

STRENGTHS to PRECISION in OVC PROGRAMMES

- Maintenance of an error log which assists data cleaning.
- Use of a standardised reporting format by all sub partners or sites.
- Introduction of cross checks in DMS.

RISKS to PRECISION in OVC PROGRAMMES

- Incorrect data received from sub-partners.
- Lack of internal quality control measures.
- Lack of dedicated M & E staff.
- Use of incorrect formulas at collation.
- Inconsistent data handling methods used in different reporting periods.
- Collation tool used may at times result in errors.
- No audit trail i.e. collation not saved.
- Illegible script could result in transcription errors.

STRENGTHS to TIMELINESS in OVC PROGRAMMES

- Adherence to reporting deadlines, send reminders.
- Regular reporting or feedback sessions.
- Dates for all stages of data management are kept on record.
- Complete data capture in as short a time as possible.

RISKS to TIMELINESS in OVC PROGRAMMES

- Lack of set deadlines for sub-partners/sites to hand in data, and for collation.
- Lack of a fixed reporting date or reference time period for different sub-partners.
- Late reporting by sub partners/sites.
- Poor record keeping at the various stages of data management.

For further information on DQAs....

- Contact Khulisa Management Services at 011-447-6464, or at info@khulisa.com.